An aerial photograph of an industrial area, likely a port or manufacturing hub. A large river, highlighted in blue, flows through the scene. Multiple railroad tracks, highlighted in red, crisscross the area, intersecting with roads and industrial buildings. The landscape is a mix of greenery, paved areas, and various structures.

# Railroad Safety In Your Neighborhood

By  
Tennessee Department of Safety  
Office of Records and Statistical Management  
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## **Table of Contents**

Introduction	5
Section 1: Crashes Involving a Motor Vehicle and a Train	7
Section 2: Motor Vehicle Crashes Occurring at a Rail Grade Crossing	15
Section 3: Combination of Data Presented in the First Two Sections	21
Figure 1: Rail Grade Crossings and Train Crashes: 2003-2007	27
Section 4: County Information 2003-2007	29
Section 5: Metropolitan Effects on Crash Totals	33
Section 6: Considerations for Further Research	37



## Introduction

Many Tennesseans drive over railroad crossings everyday, most not thinking twice about the prospect of an oncoming train making contact with their vehicle. However, upon analyzing the data collected from the entire state, perhaps they should. This report has been prepared to educate policy makers and the general public about the dangers they face when traversing a railroad crossing.





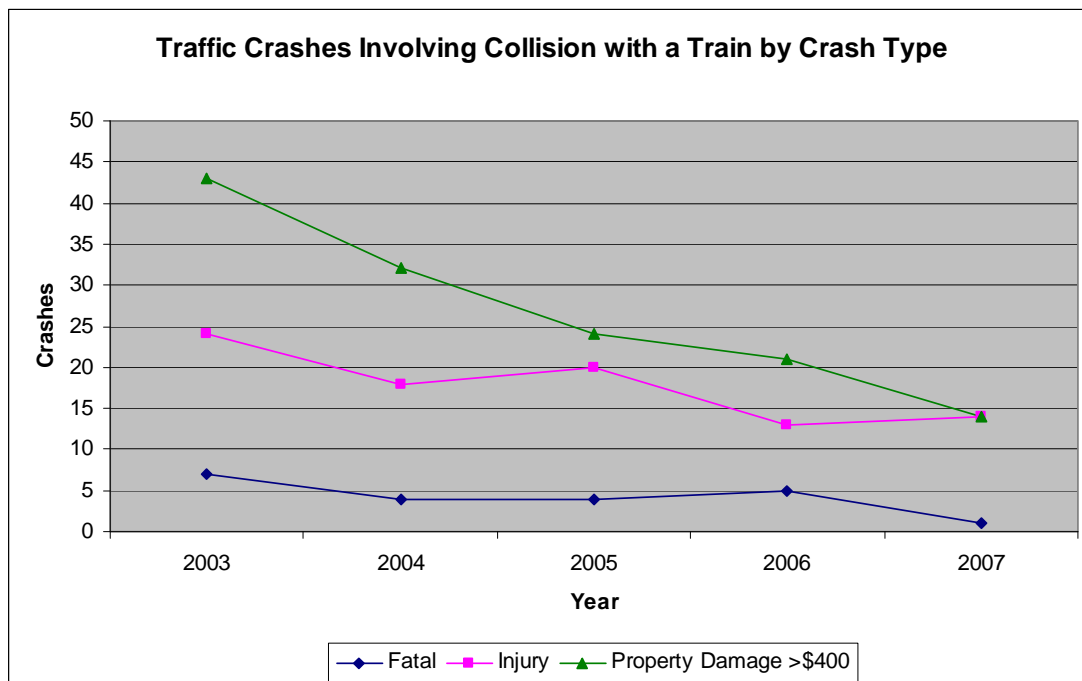
## Section 1: Crashes Involving a Motor Vehicle and a Train

This section deals with collisions of motor vehicles and trains. More specifically, it reflects the data collected in Tennessee Uniform Traffic Crash Reports that indicate the most harmful event of the crash as a collision with a railway train. These reports are submitted to the Department of Safety from law enforcement agencies throughout the state.

The table below illustrates the dangers faced at Tennessee railroad crossings. Numbers in the fatal column represent the number of crashes that had at least one traffic death. The injury column shows the number of crashes that involved at least one traffic injury. The property damage column represents the number of crashes where there were no deaths or injuries, but damage to at least one vehicle exceeded 400 dollars.

Traffic Crashes Involving Collision with a Train				
Year	Fatal	Injury	Property Damage >\$400	Total
2003	7	24	43	74
2004	4	18	32	54
2005	4	20	24	48
2006	5	13	21	39
2007	1	14	14	29
Total	21	89	134	244

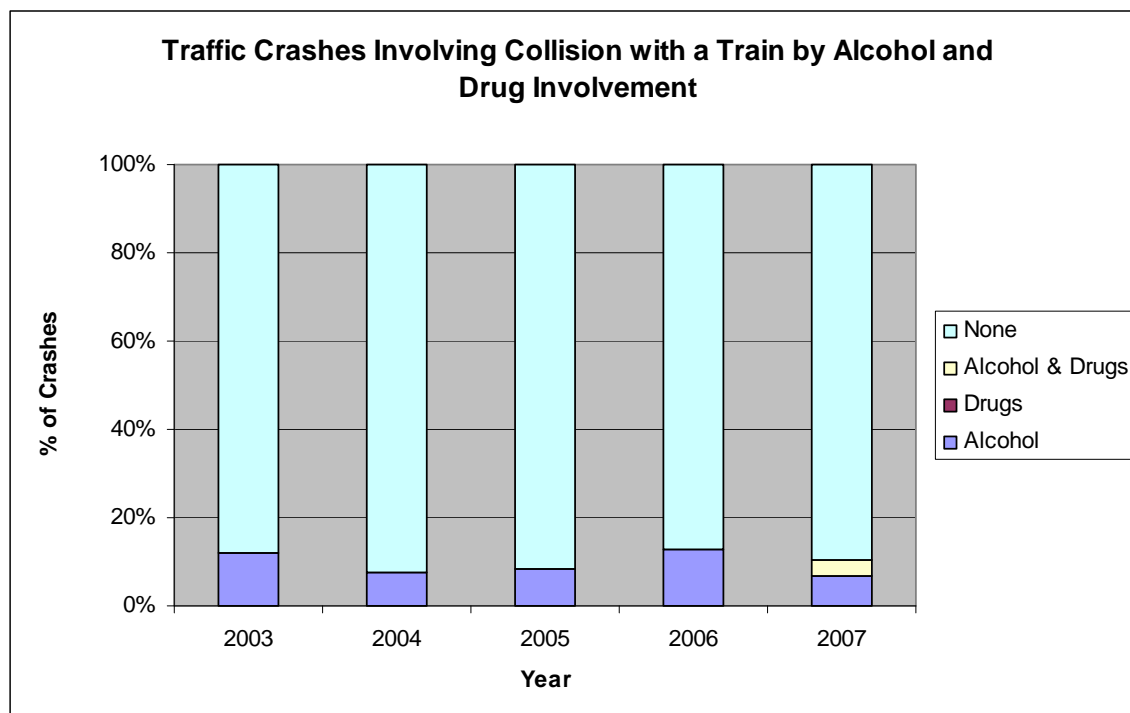
The graph below shows train crash data for the last five years. There is a strong downward trend in the number of injury and property damage crashes. It is important to note that 2007 data is preliminary and may increase slightly as more reports are entered into the database.



The table below shows the number of crashes that involved the use of alcohol and/or drugs. The alcohol column represents the number of crashes that either had a driver impaired by alcohol, had been drinking, or had alcohol present in the vehicle. The drug column represents the number of crashes that included a driver either in possession of illegal narcotics or under the influence of illegal narcotics at the time of the crash. The alcohol and drugs column shows the number of crashes that involved both alcohol and drugs.

<b>Traffic Crashes Involving Collision with a Train</b>					
<b>Year</b>	<b>Alcohol</b>	<b>Drugs</b>	<b>Alcohol &amp; Drugs</b>	<b>None</b>	<b>Total</b>
<b>2003</b>	9	0	0	65	74
<b>2004</b>	4	0	0	50	54
<b>2005</b>	4	0	0	44	48
<b>2006</b>	5	0	0	34	39
<b>2007</b>	2	0	1	26	29
<b>Total</b>	<b>24</b>	<b>0</b>	<b>1</b>	<b>219</b>	<b>244</b>

The graph below is a representation of the chart above based on percentages. From this data it appears that most drivers involved in crashes with trains are not under the influence of any intoxicants. There does not appear to be any significant change in the percentage of intoxicated drivers through the five years of data collected.





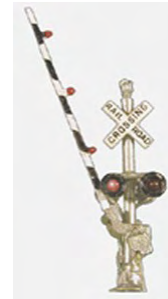
The following images will help describe the type of traffic control devices typically used at rail grade crossings.



RR Crossbucks



RR Flasher

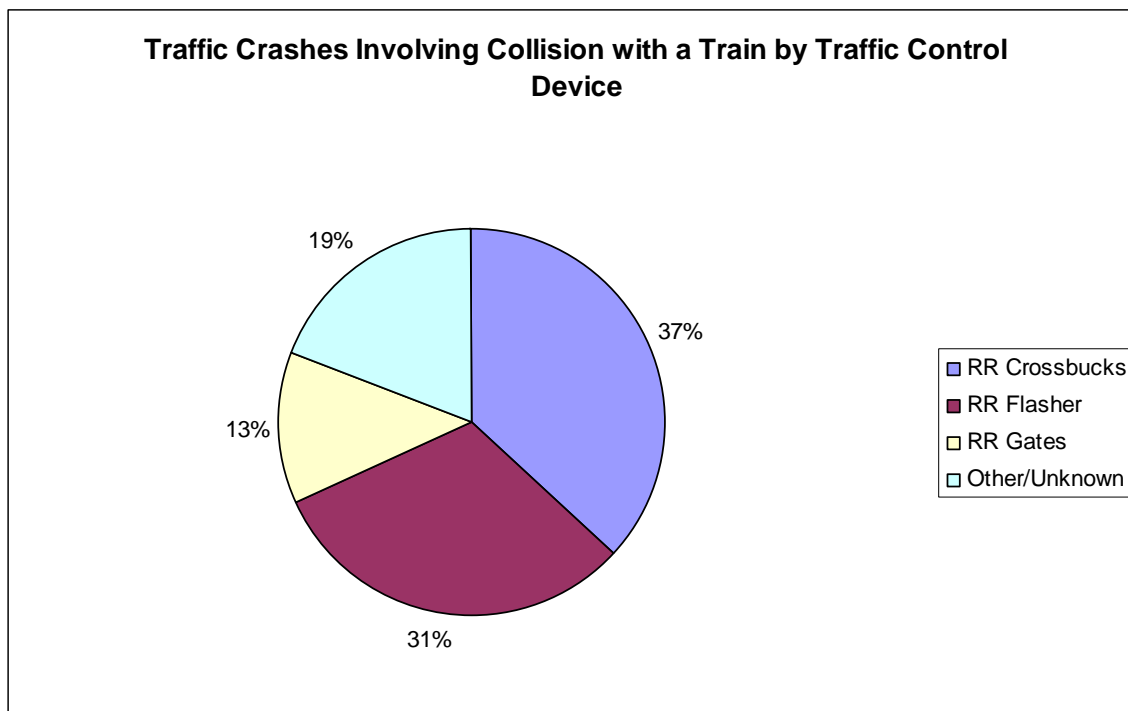


RR Gates

The table below shows the crashes involving a train by the type of traffic control devices.

Traffic Crashes Involving Collision with a Train					
Year	RR Crossbucks	RR Flasher	RR Gates	Other/Unknown	Total
2003	18	20	9	27	74
2004	17	19	7	11	54
2005	21	16	5	6	48
2006	18	12	6	3	39
2007	16	9	4	0	29
<b>Total</b>	<b>90</b>	<b>76</b>	<b>31</b>	<b>47</b>	<b>244</b>

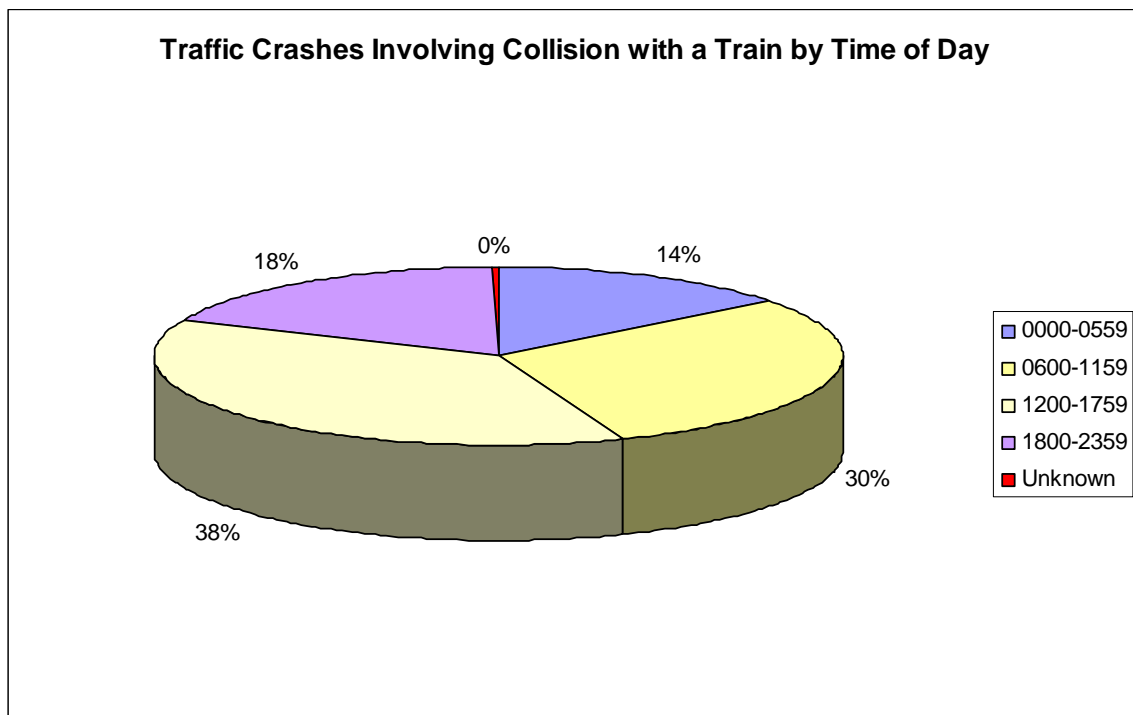
The pie chart below would seemingly suggest that crossbucks and flashers are less effective in preventing motor vehicle crashes with trains. This may be misleading, since the number of each device in use was not available at the time of this study.



The table below illustrates the times of day when trains and motor vehicles collide.

Traffic Crashes Involving Collision with a Train						
Year	0000-0559	0600-1159	1200-1759	1800-2359	Unknown	Total
2003	7	26	22	18	1	74
2004	7	16	25	6	0	54
2005	11	11	18	8	0	48
2006	7	11	13	8	0	39
2007	3	9	13	4	0	29
<b>Total</b>	<b>35</b>	<b>73</b>	<b>91</b>	<b>44</b>	<b>1</b>	<b>244</b>

This pie chart suggests that you are more likely to have a collision with a train during daylight hours.

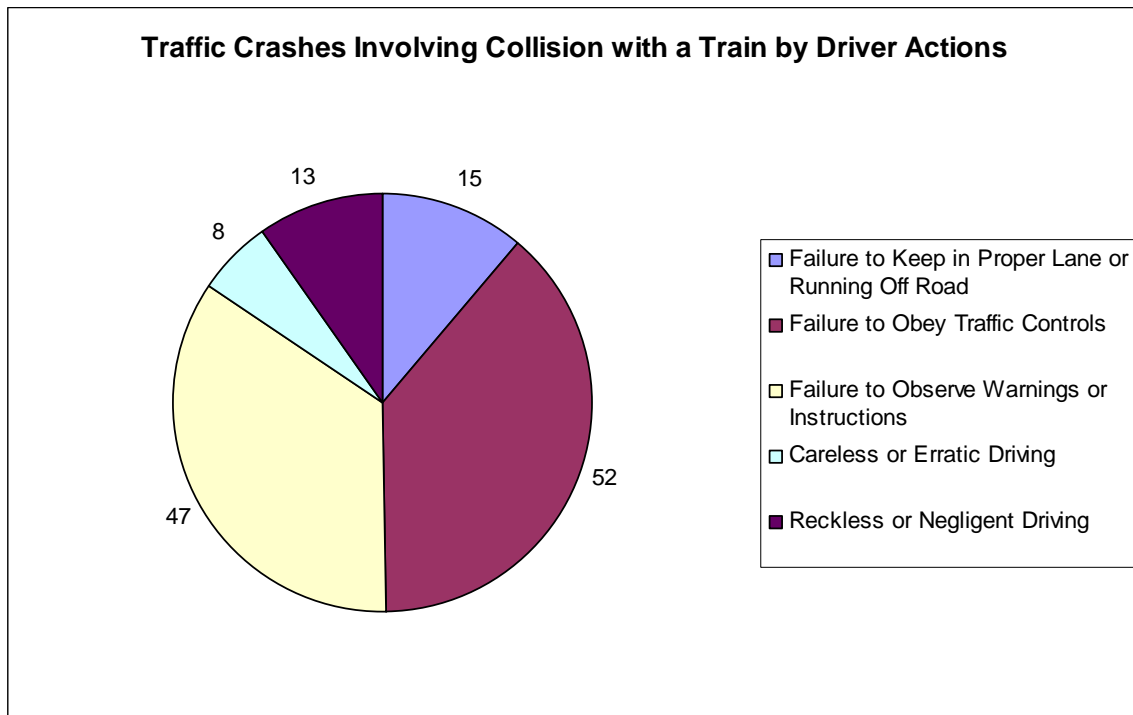


The following table represents data collected in the “Driver Actions” section of the crash report. It should be noted that some crashes may involve more than one contributing factor.

<b>Traffic Crashes Involving Collision with a Train</b>					
<b>Year</b>	<b>Failure to Keep in Proper Lane or Running Off Road</b>	<b>Failure to Obey Traffic Controls</b>	<b>Failure to Observe Warnings or Instructions</b>	<b>Careless or Erratic Driving</b>	<b>Reckless or Negligent Driving</b>
<b>2003</b>	8	14	14	1	7
<b>2004</b>	1	15	13	2	2
<b>2005</b>	2	9	7	2	2
<b>2006</b>	2	8	8	3	1
<b>2007</b>	2	6	5	0	1
<b>Total</b>	<b>15</b>	<b>52</b>	<b>47</b>	<b>8</b>	<b>13</b>

\* Represents driver actions of motor vehicle only.

According to the chart below, nearly half of the crashes were due to drivers not obeying traffic control devices or warnings.



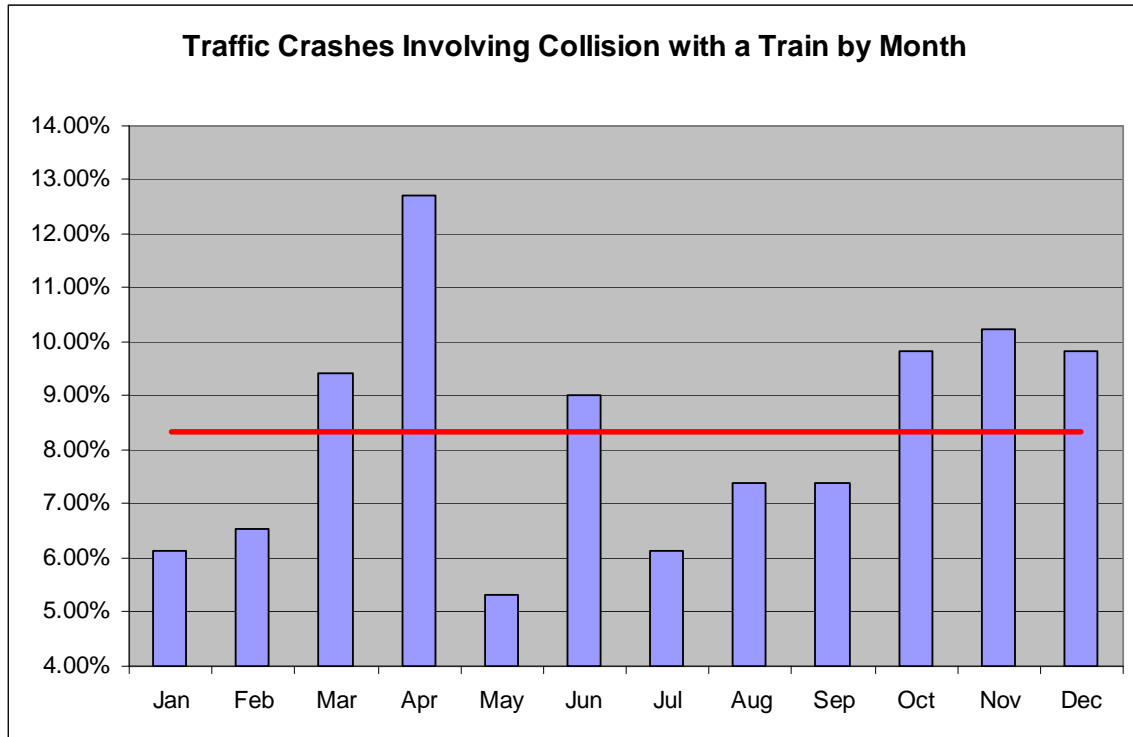
The following two tables show the number and percentage of crashes by month, respectively. These numbers reflect all crash types.

<b>Traffic Crashes Involving Collision with a Train by Month</b>						
<b>Month</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
<b>Jan</b>	2	5	1	3	4	<b>15</b>
<b>Feb</b>	7	1	3	4	1	<b>16</b>
<b>Mar</b>	7	5	4	4	3	<b>23</b>
<b>Apr</b>	10	3	7	7	4	<b>31</b>
<b>May</b>	5	1	2	2	3	<b>13</b>
<b>Jun</b>	6	7	6	2	1	<b>22</b>
<b>Jul</b>	5	3	5	1	1	<b>15</b>
<b>Aug</b>	5	6	2	3	2	<b>18</b>
<b>Sep</b>	5	3	5	2	3	<b>18</b>
<b>Oct</b>	7	3	7	5	2	<b>24</b>
<b>Nov</b>	9	9	3	3	1	<b>25</b>
<b>Dec</b>	6	8	3	3	4	<b>24</b>
<b>Total</b>	<b>74</b>	<b>54</b>	<b>48</b>	<b>39</b>	<b>29</b>	<b>244</b>

<b>Traffic Crashes Involving Collision with a Train by Month</b>						
<b>Month</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
<b>Jan</b>	2.70%	9.26%	2.08%	7.69%	13.79%	<b>6.15%</b>
<b>Feb</b>	9.46%	1.85%	6.25%	10.26%	3.45%	<b>6.56%</b>
<b>Mar</b>	9.46%	9.26%	8.33%	10.26%	10.34%	<b>9.43%</b>
<b>Apr</b>	13.51%	5.56%	14.58%	17.95%	13.79%	<b>12.70%</b>
<b>May</b>	6.76%	1.85%	4.17%	5.13%	10.34%	<b>5.33%</b>
<b>Jun</b>	8.11%	12.96%	12.50%	5.13%	3.45%	<b>9.02%</b>
<b>Jul</b>	6.76%	5.56%	10.42%	2.56%	3.45%	<b>6.15%</b>
<b>Aug</b>	6.76%	11.11%	4.17%	7.69%	6.90%	<b>7.38%</b>
<b>Sep</b>	6.76%	5.56%	10.42%	5.13%	10.34%	<b>7.38%</b>
<b>Oct</b>	9.46%	5.56%	14.58%	12.82%	6.90%	<b>9.84%</b>
<b>Nov</b>	12.16%	16.67%	6.25%	7.69%	3.45%	<b>10.25%</b>
<b>Dec</b>	8.11%	14.81%	6.25%	7.69%	13.79%	<b>9.84%</b>



The following bar graph displays the percentage of crashes by month when there was a train collision (2003-2007). It is interesting to note that April has a higher than normal number of crashes, while there is a sharp drop in May. The expected percentage for each month is displayed by the red line (8.33%).

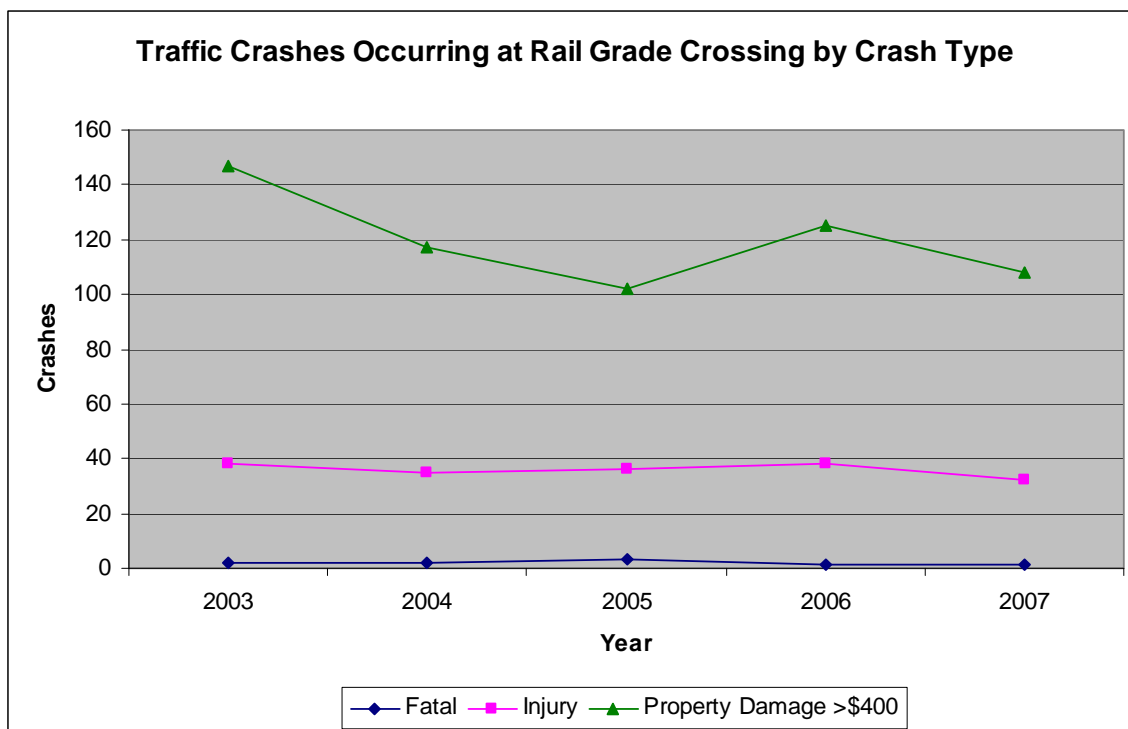




## Section 2: Motor Vehicle Crashes Occurring at a Rail Grade Crossing

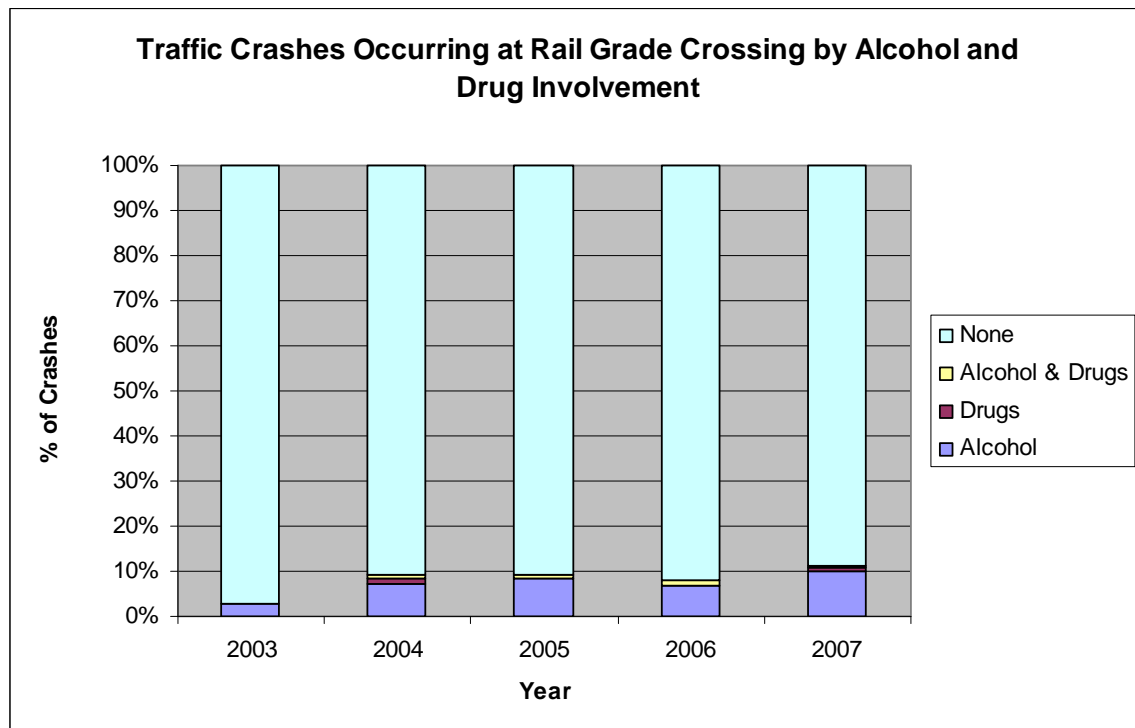
This section deals with the data collected by Tennessee Uniform Traffic Crash Reports that indicate the relation to junction at the first harmful event as a rail grade crossing.. These reports can be found in a database that collects information from crashes all over the state. These crashes involved single or multiple vehicle crashes only. **Please note that none of these crashes involved a collision with a train.**

Traffic Crashes Occurring at Rail Grade Crossing				
Year	Fatal	Injury	Property Damage >\$400	Total
2003	2	38	147	187
2004	2	35	117	154
2005	3	36	102	141
2006	1	38	125	164
2007	1	32	108	141
Total	9	179	599	787



The table below shows the number of crashes that involve the use of alcohol and/or drugs. The categories are defined the same as in section one.

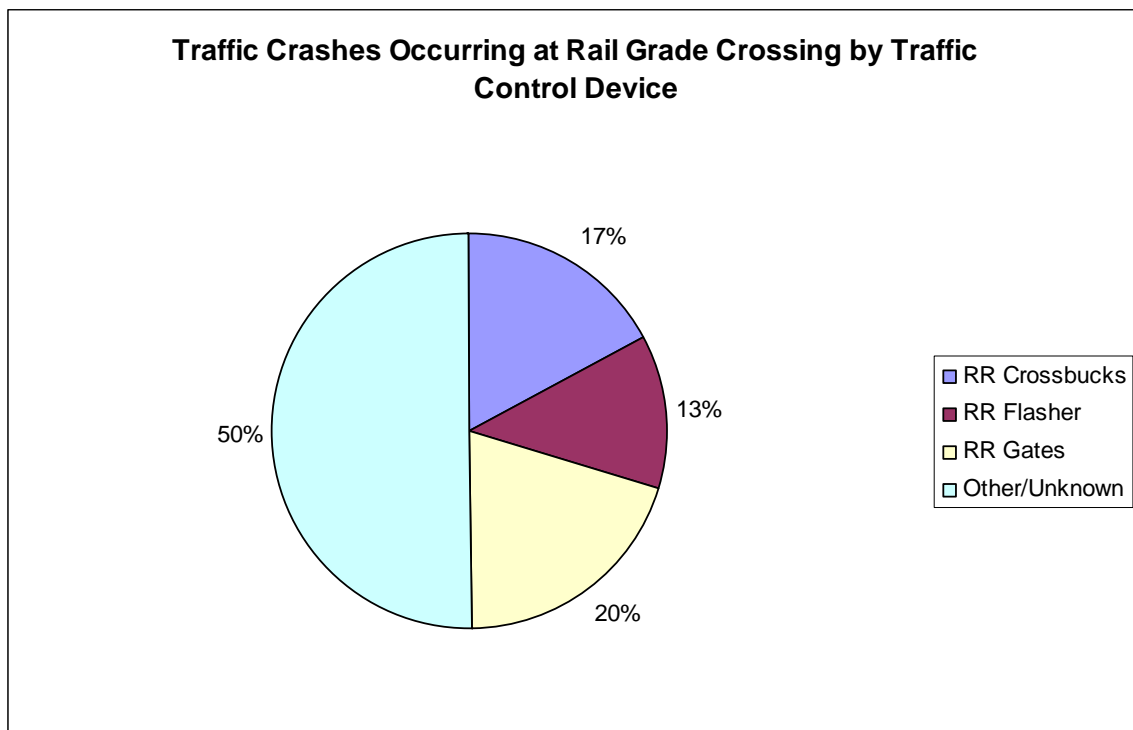
Traffic Crashes Occurring at Rail Grade Crossing					
Year	Alcohol	Drugs	Alcohol & Drugs	None	Total
2003	5	0	0	182	187
2004	11	2	1	140	154
2005	12	0	1	128	141
2006	11	0	2	151	164
2007	14	1	1	125	141
<b>Total</b>	<b>53</b>	<b>3</b>	<b>5</b>	<b>726</b>	<b>787</b>





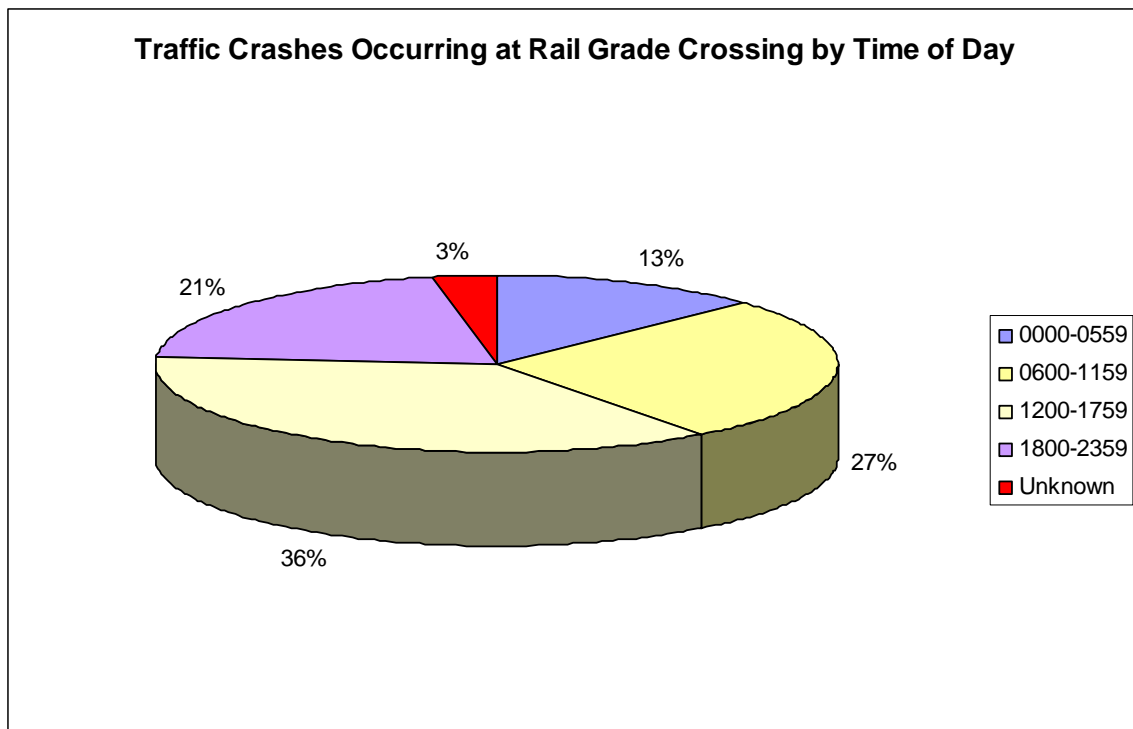
The table below shows the crashes occurring at a rail grade crossing by the type of traffic control devices. The categories are defined the same as in section one.

<b>Traffic Crashes Occurring at Rail Grade Crossing</b>					
<b>Year</b>	<b>RR Crossbucks</b>	<b>RR Flasher</b>	<b>RR Gates</b>	<b>Other/Unknown</b>	<b>Total</b>
<b>2003</b>	33	27	28	99	187
<b>2004</b>	24	23	27	80	154
<b>2005</b>	18	17	35	71	141
<b>2006</b>	30	16	39	79	164
<b>2007</b>	31	16	28	66	141
<b>Total</b>	<b>136</b>	<b>99</b>	<b>157</b>	<b>395</b>	<b>787</b>



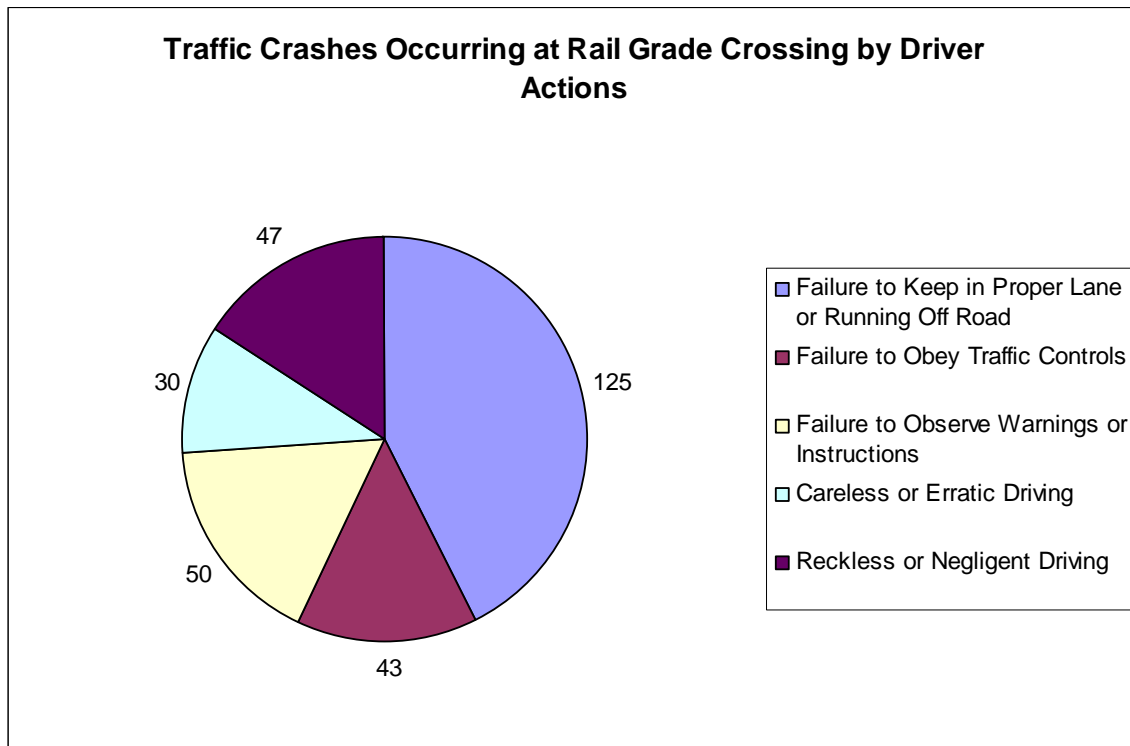
The table below illustrates the times of day when motor vehicles crash at rail grade crossings.

Traffic Crashes Occurring at Rail Grade Crossing						
Year	0000-0559	0600-1159	1200-1759	1800-2359	Unknown	Total
2003	23	45	75	37	7	187
2004	20	38	54	34	8	154
2005	16	38	47	37	3	141
2006	23	53	57	27	4	164
2007	18	38	54	30	1	141
<b>Total</b>	<b>100</b>	<b>212</b>	<b>287</b>	<b>165</b>	<b>23</b>	<b>787</b>



The following table represents data collected in the driver actions section of the crash report. It should be noted that some crashes may involve more than one driver action.

Traffic Crashes Occurring at Rail Grade Crossing					
Year	Failure to Keep in Proper Lane or Running Off Road	Failure to Obey Traffic Controls	Failure to Observe Warnings or Instructions	Careless or Erratic Driving	Reckless or Negligent Driving
2003	20	10	15	12	5
2004	31	7	9	1	7
2005	19	10	7	3	9
2006	32	7	14	8	12
2007	23	9	5	6	14
<b>Total</b>	<b>125</b>	<b>43</b>	<b>50</b>	<b>30</b>	<b>47</b>



The following two tables show the number and percentage of crashes by month, respectively. These numbers reflect all crash types.

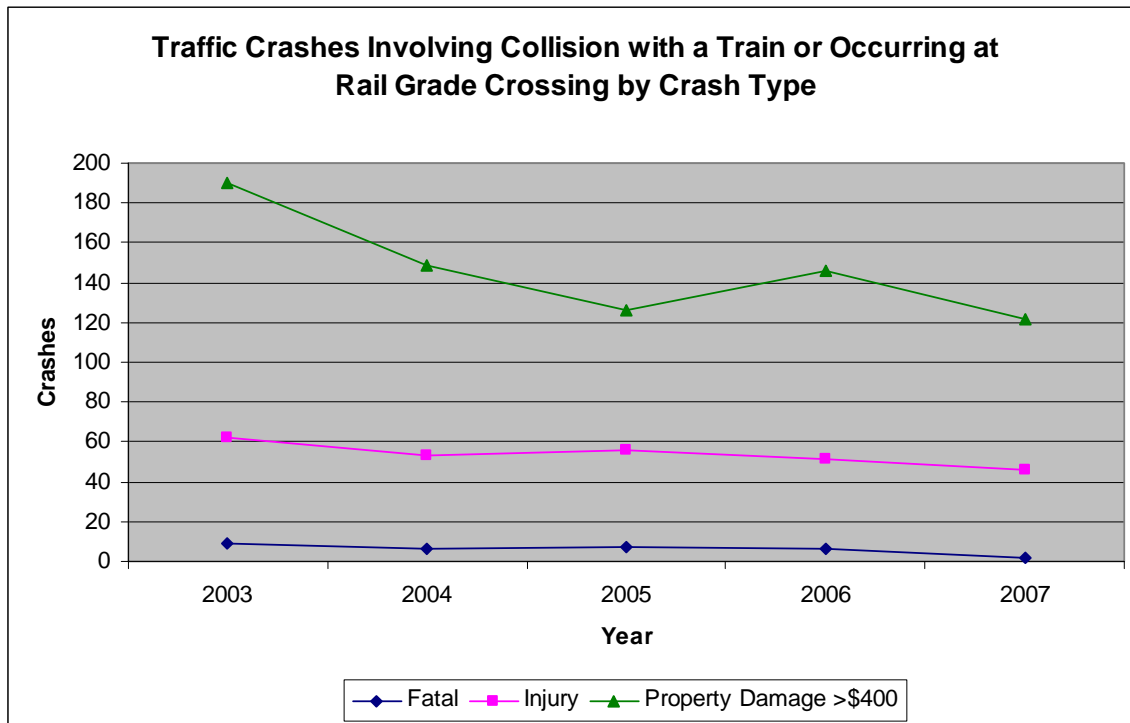
<b>Traffic Crashes Occurring at Rail Grade Crossing by Month</b>						
<b>Month</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
<b>Jan</b>	14	21	4	15	10	<b>64</b>
<b>Feb</b>	20	8	13	14	17	<b>72</b>
<b>Mar</b>	14	17	15	4	13	<b>63</b>
<b>Apr</b>	23	8	12	22	7	<b>72</b>
<b>May</b>	14	9	11	16	14	<b>64</b>
<b>Jun</b>	13	14	12	11	16	<b>66</b>
<b>Jul</b>	13	11	18	13	9	<b>64</b>
<b>Aug</b>	10	17	11	12	9	<b>59</b>
<b>Sep</b>	17	10	12	18	17	<b>74</b>
<b>Oct</b>	24	13	15	14	8	<b>74</b>
<b>Nov</b>	17	14	11	11	7	<b>60</b>
<b>Dec</b>	8	12	7	14	14	<b>55</b>
<b>Total</b>	<b>187</b>	<b>154</b>	<b>141</b>	<b>164</b>	<b>141</b>	<b>787</b>

<b>Traffic Crashes Occurring at Rail Grade Crossing by Month</b>						
<b>Month</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
<b>Jan</b>	7.49%	13.64%	2.84%	9.15%	7.09%	<b>8.13%</b>
<b>Feb</b>	10.70%	5.19%	9.22%	8.54%	12.06%	<b>9.15%</b>
<b>Mar</b>	7.49%	11.04%	10.64%	2.44%	9.22%	<b>8.01%</b>
<b>Apr</b>	12.30%	5.19%	8.51%	13.41%	4.96%	<b>9.15%</b>
<b>May</b>	7.49%	5.84%	7.80%	9.76%	9.93%	<b>8.13%</b>
<b>Jun</b>	6.95%	9.09%	8.51%	6.71%	11.35%	<b>8.39%</b>
<b>Jul</b>	6.95%	7.14%	12.77%	7.93%	6.38%	<b>8.13%</b>
<b>Aug</b>	5.35%	11.04%	7.80%	7.32%	6.38%	<b>7.50%</b>
<b>Sep</b>	9.09%	6.49%	8.51%	10.98%	12.06%	<b>9.40%</b>
<b>Oct</b>	12.83%	8.44%	10.64%	8.54%	5.67%	<b>9.40%</b>
<b>Nov</b>	9.09%	9.09%	7.80%	6.71%	4.96%	<b>7.62%</b>
<b>Dec</b>	4.28%	7.79%	4.96%	8.54%	9.93%	<b>6.99%</b>

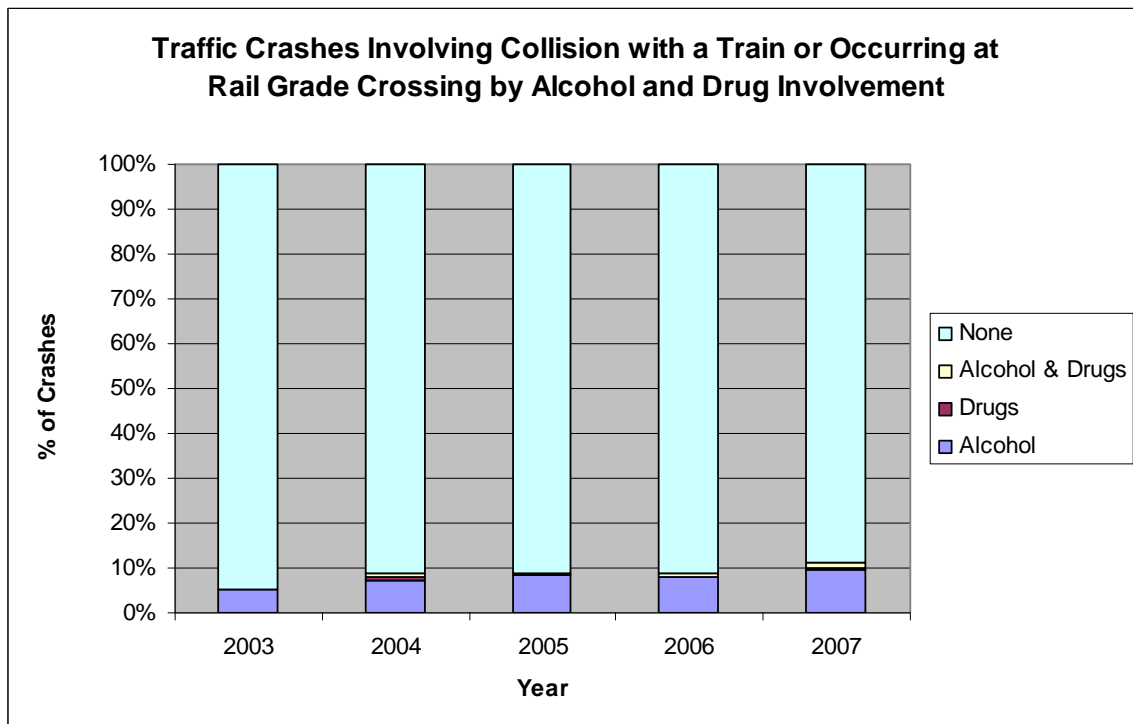


### Section 3: Combination of the Data Presented in the First Two Sections

Traffic Crashes Involving Collision with a Train or Occurring at Rail Grade Crossing				
Year	Fatal	Injury	Property Damage >\$400	Total
2003	9	62	190	261
2004	6	53	149	208
2005	7	56	126	189
2006	6	51	146	203
2007	2	46	122	170
<b>Total</b>	<b>30</b>	<b>268</b>	<b>733</b>	<b>1,031</b>

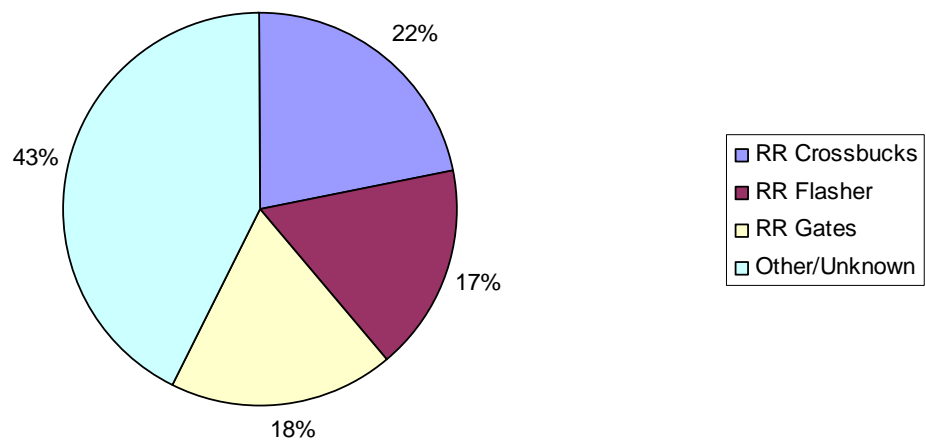


Traffic Crashes Involving Collision with a Train or Occurring at Rail Grade Crossing					
Year	Alcohol	Drugs	Alcohol & Drugs	None	Total
2003	14	0	0	247	261
2004	15	2	1	190	208
2005	16	0	1	172	189
2006	16	0	2	185	203
2007	16	1	2	151	170
Total	77	3	6	945	1,031

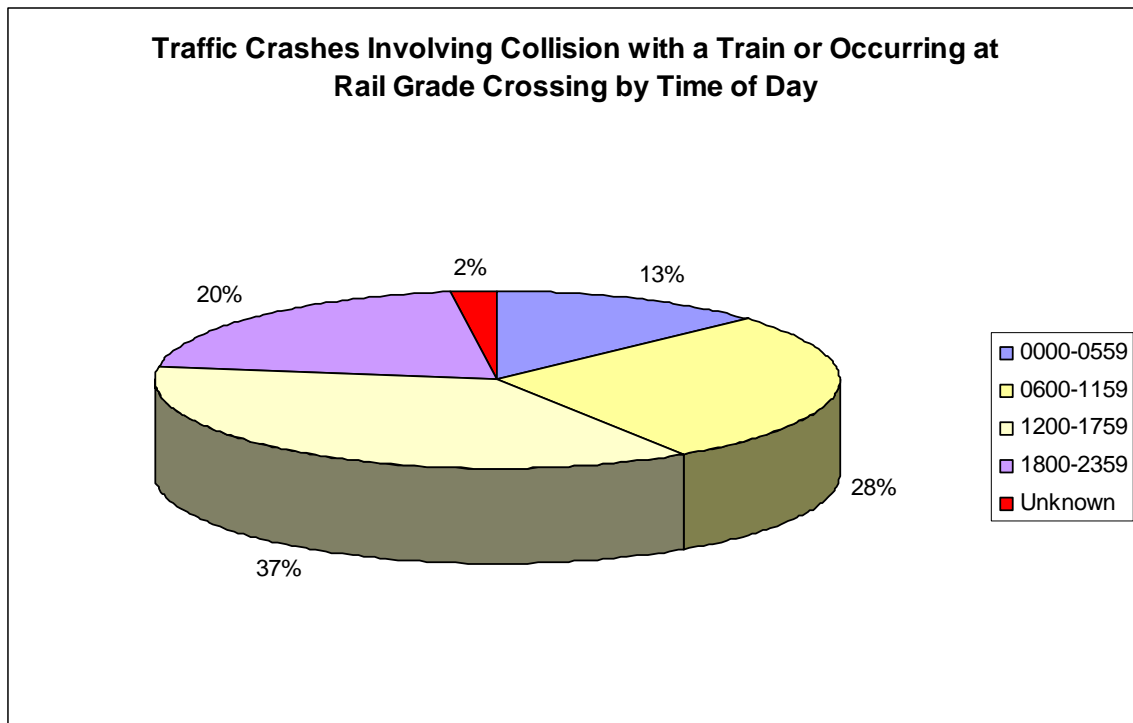


Traffic Crashes Involving Collision with a Train or Occurring at Rail Grade Crossing					
Year	RR Crossbucks	RR Flasher	RR Gates	Other/Unknown	Total
2003	51	47	37	126	261
2004	41	42	34	91	208
2005	39	33	40	77	189
2006	48	28	45	82	203
2007	47	25	32	66	170
Total	226	175	188	442	1,031

**Traffic Crashes Involving Collision with a Train or Occurring at Rail Grade Crossing by Traffic Control Device**

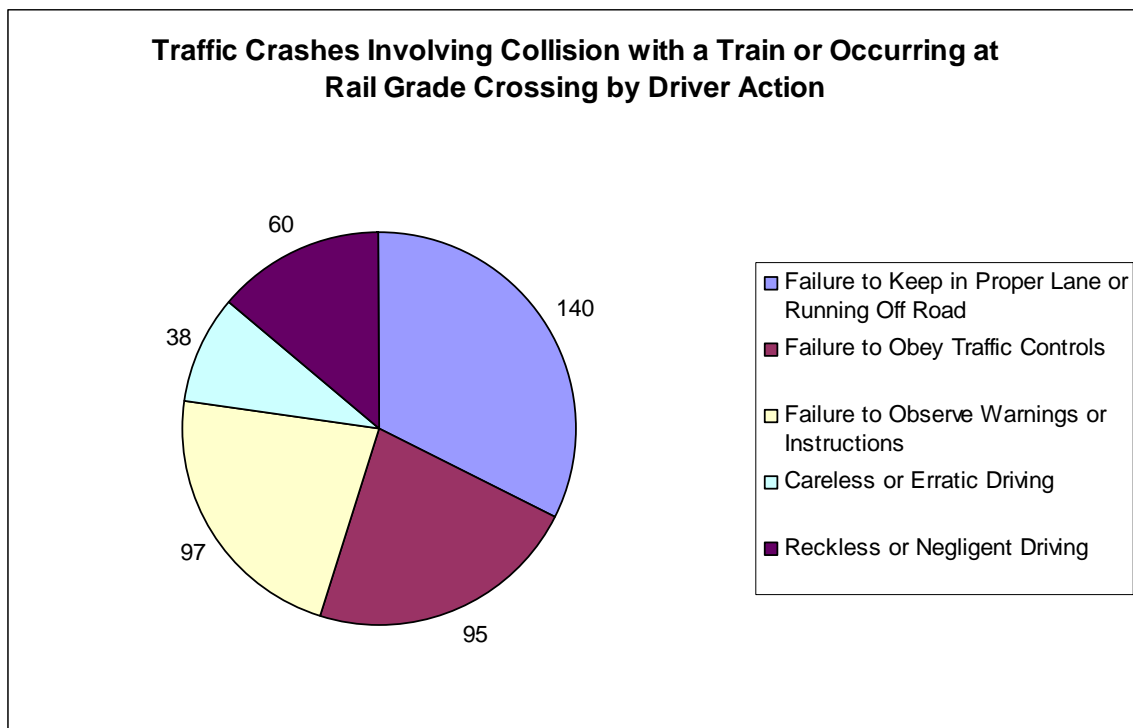


Traffic Crashes Involving Collision with a Train or Occurring at Rail Grade Crossing						
Year	0000-0559	0600-1159	1200-1759	1800-2359	Unknown	Total
2003	30	71	97	55	8	261
2004	27	54	79	40	8	208
2005	27	49	65	45	3	189
2006	30	64	70	35	4	203
2007	21	47	67	34	1	170
<b>Total</b>	<b>135</b>	<b>285</b>	<b>378</b>	<b>209</b>	<b>24</b>	<b>1,031</b>





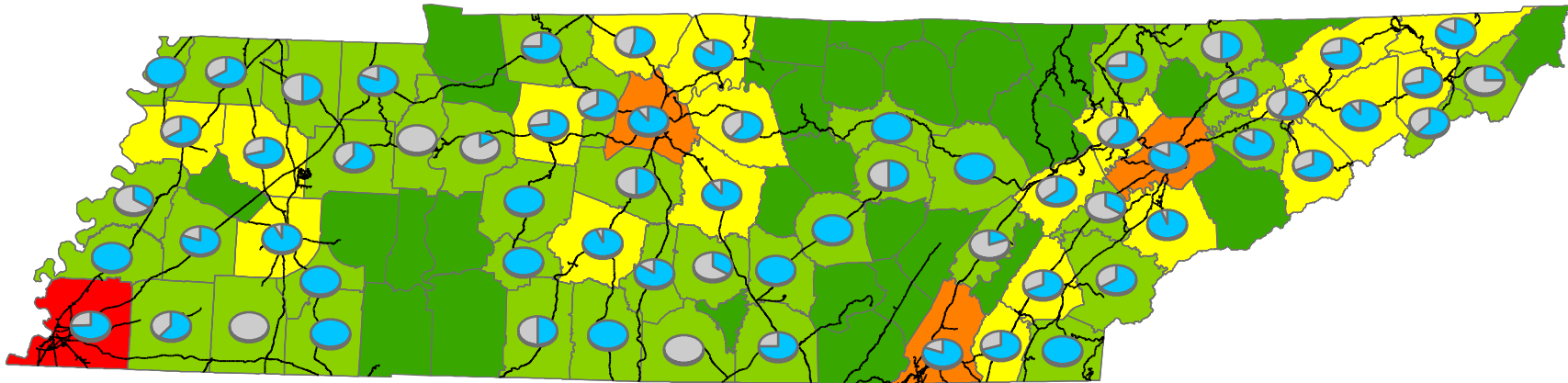
Traffic Crashes Involving Collision with a Train or Occurring at Rail Grade Crossing					
Year	Failure to Keep in Proper Lane or Running Off Road	Failure to Obey Traffic Controls	Failure to Observe Warnings or Instructions	Careless or Erratic Driving	Reckless or Negligent Driving
2003	28	24	29	13	12
2004	32	22	22	3	9
2005	21	19	14	5	11
2006	34	15	22	11	13
2007	25	15	10	6	15
Total	140	95	97	38	60



<b>Traffic Crashes Involving Collision with a Train or Occurring at Rail Grade Crossing</b>						
<b>Month</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
<b>Jan</b>	16	26	5	18	14	<b>79</b>
<b>Feb</b>	27	9	16	18	18	<b>88</b>
<b>Mar</b>	21	22	19	8	16	<b>86</b>
<b>Apr</b>	33	11	19	29	11	<b>103</b>
<b>May</b>	19	10	13	18	17	<b>77</b>
<b>Jun</b>	19	21	18	13	17	<b>88</b>
<b>Jul</b>	18	14	23	14	10	<b>79</b>
<b>Aug</b>	15	23	13	15	11	<b>77</b>
<b>Sep</b>	22	13	17	20	20	<b>92</b>
<b>Oct</b>	31	16	22	19	10	<b>98</b>
<b>Nov</b>	26	23	14	14	8	<b>85</b>
<b>Dec</b>	14	20	10	17	18	<b>79</b>
<b>Total</b>	<b>261</b>	<b>208</b>	<b>189</b>	<b>203</b>	<b>170</b>	<b>1,031</b>

<b>Traffic Crashes Involving Collision with a Train or Occurring at Rail Grade Crossing</b>						
<b>Month</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
<b>Jan</b>	6.13%	12.50%	2.65%	8.87%	8.24%	<b>7.66%</b>
<b>Feb</b>	10.34%	4.33%	8.47%	8.87%	10.59%	<b>8.54%</b>
<b>Mar</b>	8.05%	10.58%	10.05%	3.94%	9.41%	<b>8.34%</b>
<b>Apr</b>	12.64%	5.29%	10.05%	14.29%	6.47%	<b>9.99%</b>
<b>May</b>	7.28%	4.81%	6.88%	8.87%	10.00%	<b>7.47%</b>
<b>Jun</b>	7.28%	10.10%	9.52%	6.40%	10.00%	<b>8.54%</b>
<b>Jul</b>	6.90%	6.73%	12.17%	6.90%	5.88%	<b>7.66%</b>
<b>Aug</b>	5.75%	11.06%	6.88%	7.39%	6.47%	<b>7.47%</b>
<b>Sep</b>	8.43%	6.25%	8.99%	9.85%	11.76%	<b>8.92%</b>
<b>Oct</b>	11.88%	7.69%	11.64%	9.36%	5.88%	<b>9.51%</b>
<b>Nov</b>	9.96%	11.06%	7.41%	6.90%	4.71%	<b>8.24%</b>
<b>Dec</b>	5.36%	9.62%	5.29%	8.37%	10.59%	<b>7.66%</b>

# Rail Grade Crossings and Train Crashes: 2003 - 2007



The 24 TN Counties with the Highest Incidence of Rail Grade Crossings and Train Crashes (by Total)

County	Crash at Rail Grade Crossing	Collision with Train	Total Crashes
Shelby	158	54	212
Davidson	106	14	120
Knox	78	16	94
Hamilton	61	15	76
Rutherford	32	4	36
Sumner	26	5	31
Greene	24	3	27
Madison	22	2	24
Hamblen	14	10	24
Dickson	14	5	19
McMinn	13	6	19
Washington	13	5	18
Anderson	11	7	18
Bradley	12	5	17
Blount	15	1	16
Hawkins	11	4	15
Maury	13	1	14
Gibson	10	4	14
Roane	9	5	14
Cocke	9	4	13
Wilson	8	5	13
Dyer	8	4	12
Sullivan	9	2	11
Robertson	6	5	11

The 21 TN Counties with the Next Highest Incidence of Rail Grade Crossings and Train Crashes (by Total)

County	Crash at Rail Grade Crossing	Collision with Train	Total Crashes
Putnam	9	0	9
Obion	6	3	9
Carroll	5	3	8
Fayette	5	3	8
Unicoi	5	3	8
Carter	2	6	8
Coffee	6	0	6
Jefferson	5	1	6
Marshall	5	1	6
Monroe	4	2	6
Williamson	3	3	6
Loudon	2	4	6
Humphreys	1	5	6
Haywood	4	1	5
Henry	4	1	5
Rhea	1	4	5
Campbell	3	1	4
Franklin	3	1	4
Montgomery	3	1	4
Lawrence	2	2	4
Weakley	2	2	4

The 19 TN Counties with the Next Highest Incidence of Rail Grade Crossings and Train Crashes (by Total)

County	Crash at Rail Grade Crossing	Collision with Train	Total Crashes
Polk	3	0	3
Tipton	3	0	3
Cheatham	2	1	3
Grainger	2	1	3
Bedford	1	2	3
Lauderdale	1	2	3
McNairy	2	0	2
Claiborne	1	1	2
White	1	1	2
Chester	1	0	1
Cumberland	1	0	1
Giles	1	0	1
Hickman	1	0	1
Lake	1	0	1
Lewis	1	0	1
Warren	1	0	1
Benton	0	1	1
Hardeman	0	1	1
Lincoln	0	1	1

## Legend

Railroad Tracks

### Types of Crash



at Rail Grade Crossings

with a Train

### # of Crashes by County

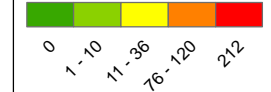


Figure 1.



## Section 4: County Information 2003-2007

Traffic Crashes Involving Collision with a Train									
County	Fatal	Injury	PD >\$400	Total	County	Fatal	Injury	PD >\$400	Total
Anderson	0	4	3	7	Lauderdale	0	1	1	2
Bedford	1	0	1	2	Lawrence	0	0	2	2
Benton	0	1	0	1	Lewis	0	0	0	0
Bledsoe	0	0	0	0	Lincoln	0	1	0	1
Blount	0	1	0	1	Loudon	0	2	2	4
Bradley	0	1	4	5	McMinn	0	4	2	6
Campbell	0	0	1	1	McNairy	0	0	0	0
Cannon	0	0	0	0	Macon	0	0	0	0
Carroll	0	1	2	3	Madison	0	1	1	2
Carter	0	1	5	6	Marion	0	0	0	0
Cheatham	0	1	0	1	Marshall	0	0	1	1
Chester	0	0	0	0	Maury	0	1	0	1
Claiborne	0	1	0	1	Meigs	0	0	0	0
Clay	0	0	0	0	Monroe	0	0	2	2
Cocke	0	3	1	4	Montgomery	1	0	0	1
Coffee	0	0	0	0	Moore	0	0	0	0
Crockett	0	0	0	0	Morgan	0	0	0	0
Cumberland	0	0	0	0	Obion	0	1	2	3
Davidson	1	3	10	14	Overton	0	0	0	0
Decatur	0	0	0	0	Perry	0	0	0	0
De Kalb	0	0	0	0	Pickett	0	0	0	0
Dickson	1	0	4	5	Polk	0	0	0	0
Dyer	0	2	2	4	Putnam	0	0	0	0
Fayette	2	0	1	3	Rhea	1	0	3	4
Fentress	0	0	0	0	Roane	0	3	2	5
Franklin	1	0	0	1	Robertson	0	1	4	5
Gibson	0	2	2	4	Rutherford	3	1	0	4
Giles	0	0	0	0	Scott	0	0	0	0
Grainger	0	1	0	1	Sequatchie	0	0	0	0
Greene	0	2	1	3	Sevier	0	0	0	0
Grundy	0	0	0	0	Shelby	4	9	41	54
Hamblen	0	8	2	10	Smith	0	0	0	0
Hamilton	0	8	7	15	Stewart	0	0	0	0
Hancock	0	0	0	0	Sullivan	0	1	1	2
Hardeman	0	1	0	1	Sumner	1	4	0	5
Hardin	0	0	0	0	Tipton	0	0	0	0
Hawkins	1	3	0	4	Trousdale	0	0	0	0
Haywood	0	0	1	1	Unicoi	1	0	2	3
Henderson	0	0	0	0	Union	0	0	0	0
Henry	0	0	1	1	Van Buren	0	0	0	0
Hickman	0	0	0	0	Warren	0	0	0	0
Houston	0	0	0	0	Washington	1	1	3	5
Humphreys	0	5	0	5	Wayne	0	0	0	0
Jackson	0	0	0	0	Weakley	0	1	1	2
Jefferson	1	0	0	1	White	0	0	1	1
Johnson	0	0	0	0	Williamson	0	1	2	3
Knox	0	5	11	16	Wilson	1	2	2	5
Lake	0	0	0	0	<b>Total</b>	<b>21</b>	<b>89</b>	<b>134</b>	<b>244</b>

Traffic Crashes Occurring at Rail Grade Crossing									
County	Fatal	Injury	PD >\$400	Total	County	Fatal	Injury	PD >\$400	Total
Anderson	0	3	8	11	Lauderdale	0	0	1	1
Bedford	0	0	1	1	Lawrence	0	0	2	2
Benton	0	0	0	0	Lewis	0	0	1	1
Bledsoe	0	0	0	0	Lincoln	0	0	0	0
Blount	0	5	10	15	Loudon	0	0	2	2
Bradley	0	1	11	12	McMinn	0	3	10	13
Campbell	0	1	2	3	McNairy	0	1	1	2
Cannon	0	0	0	0	Macon	0	0	0	0
Carroll	0	2	3	5	Madison	0	5	17	22
Carter	0	0	2	2	Marion	0	0	0	0
Cheatham	0	0	2	2	Marshall	0	0	5	5
Chester	0	0	1	1	Maury	0	1	12	13
Claiborne	0	1	0	1	Meigs	0	0	0	0
Clay	0	0	0	0	Monroe	0	0	4	4
Cocke	0	3	6	9	Montgomery	0	1	2	3
Coffee	0	0	6	6	Moore	0	0	0	0
Crockett	0	0	0	0	Morgan	0	0	0	0
Cumberland	0	1	0	1	Obion	0	0	6	6
Davidson	2	24	80	106	Overton	0	0	0	0
Decatur	0	0	0	0	Perry	0	0	0	0
De Kalb	0	0	0	0	Pickett	0	0	0	0
Dickson	1	4	9	14	Polk	0	0	3	3
Dyer	0	3	5	8	Putnam	0	2	7	9
Fayette	0	1	4	5	Rhea	0	0	1	1
Fentress	0	0	0	0	Roane	0	3	6	9
Franklin	0	0	3	3	Robertson	1	1	4	6
Gibson	0	1	9	10	Rutherford	1	12	19	32
Giles	0	0	1	1	Scott	0	0	0	0
Grainger	0	2	0	2	Sequatchie	0	0	0	0
Greene	0	5	19	24	Sevier	0	0	0	0
Grundy	0	0	0	0	Shelby	0	33	125	158
Hamblen	0	2	12	14	Smith	0	0	0	0
Hamilton	0	16	45	61	Stewart	0	0	0	0
Hancock	0	0	0	0	Sullivan	0	3	6	9
Hardeman	0	0	0	0	Sumner	1	5	20	26
Hardin	0	0	0	0	Tipton	0	0	3	3
Hawkins	0	1	10	11	Trousdale	0	0	0	0
Haywood	0	1	3	4	Unicoi	0	1	4	5
Henderson	0	0	0	0	Union	0	0	0	0
Henry	0	0	4	4	Van Buren	0	0	0	0
Hickman	0	0	1	1	Warren	0	0	1	1
Houston	0	0	0	0	Washington	0	2	11	13
Humphreys	0	1	0	1	Wayne	0	0	0	0
Jackson	0	0	0	0	Weakley	0	0	2	2
Jefferson	1	2	2	5	White	0	0	1	1
Johnson	0	0	0	0	Williamson	0	2	1	3
Knox	2	24	52	78	Wilson	0	0	8	8
Lake	0	0	1	1	Unknown	0	0	2	2
					<b>Total</b>	<b>9</b>	<b>179</b>	<b>599</b>	<b>787</b>

Traffic Crashes Involving Collision with a Train or Occurring at Rail Grade Crossing									
County	Fatal	Injury	PD >\$400	Total	County	Fatal	Injury	PD >\$400	Total
Anderson	0	7	11	18	Lauderdale	0	1	2	3
Bedford	1	0	2	3	Lawrence	0	0	4	4
Benton	0	1	0	1	Lewis	0	0	1	1
Bledsoe	0	0	0	0	Lincoln	0	1	0	1
Blount	0	6	10	16	Loudon	0	2	4	6
Bradley	0	2	15	17	McMinn	0	7	12	19
Campbell	0	1	3	4	McNairy	0	1	1	2
Cannon	0	0	0	0	Macon	0	0	0	0
Carroll	0	3	5	8	Madison	0	6	18	24
Carter	0	1	7	8	Marion	0	0	0	0
Cheatham	0	1	2	3	Marshall	0	0	6	6
Chester	0	0	1	1	Maury	0	2	12	14
Claiborne	0	2	0	2	Meigs	0	0	0	0
Clay	0	0	0	0	Monroe	0	0	6	6
Cocke	0	6	7	13	Montgomery	1	1	2	4
Coffee	0	0	6	6	Moore	0	0	0	0
Crockett	0	0	0	0	Morgan	0	0	0	0
Cumberland	0	1	0	1	Obion	0	1	8	9
Davidson	3	27	90	120	Overton	0	0	0	0
Decatur	0	0	0	0	Perry	0	0	0	0
De Kalb	0	0	0	0	Pickett	0	0	0	0
Dickson	2	4	13	19	Polk	0	0	3	3
Dyer	0	5	7	12	Putnam	0	2	7	9
Fayette	2	1	5	8	Rhea	1	0	4	5
Fentress	0	0	0	0	Roane	0	6	8	14
Franklin	1	0	3	4	Robertson	1	2	8	11
Gibson	0	3	11	14	Rutherford	4	13	19	36
Giles	0	0	1	1	Scott	0	0	0	0
Grainger	0	3	0	3	Sequatchie	0	0	0	0
Greene	0	7	20	27	Sevier	0	0	0	0
Grundy	0	0	0	0	Shelby	4	42	166	212
Hamblen	0	10	14	24	Smith	0	0	0	0
Hamilton	0	24	52	76	Stewart	0	0	0	0
Hancock	0	0	0	0	Sullivan	0	4	7	11
Hardeman	0	1	0	1	Sumner	2	9	20	31
Hardin	0	0	0	0	Tipton	0	0	3	3
Hawkins	1	4	10	15	Trousdale	0	0	0	0
Haywood	0	1	4	5	Unicoi	1	1	6	8
Henderson	0	0	0	0	Union	0	0	0	0
Henry	0	0	5	5	Van Buren	0	0	0	0
Hickman	0	0	1	1	Warren	0	0	1	1
Houston	0	0	0	0	Washington	1	3	14	18
Humphreys	0	6	0	6	Wayne	0	0	0	0
Jackson	0	0	0	0	Weakley	0	1	3	4
Jefferson	2	2	2	6	White	0	0	2	2
Johnson	0	0	0	0	Williamson	0	3	3	6
Knox	2	29	63	94	Wilson	1	2	10	13
Lake	0	0	1	1	Unknown	0	0	2	2
					<b>Total</b>	<b>30</b>	<b>268</b>	<b>733</b>	<b>1,031</b>

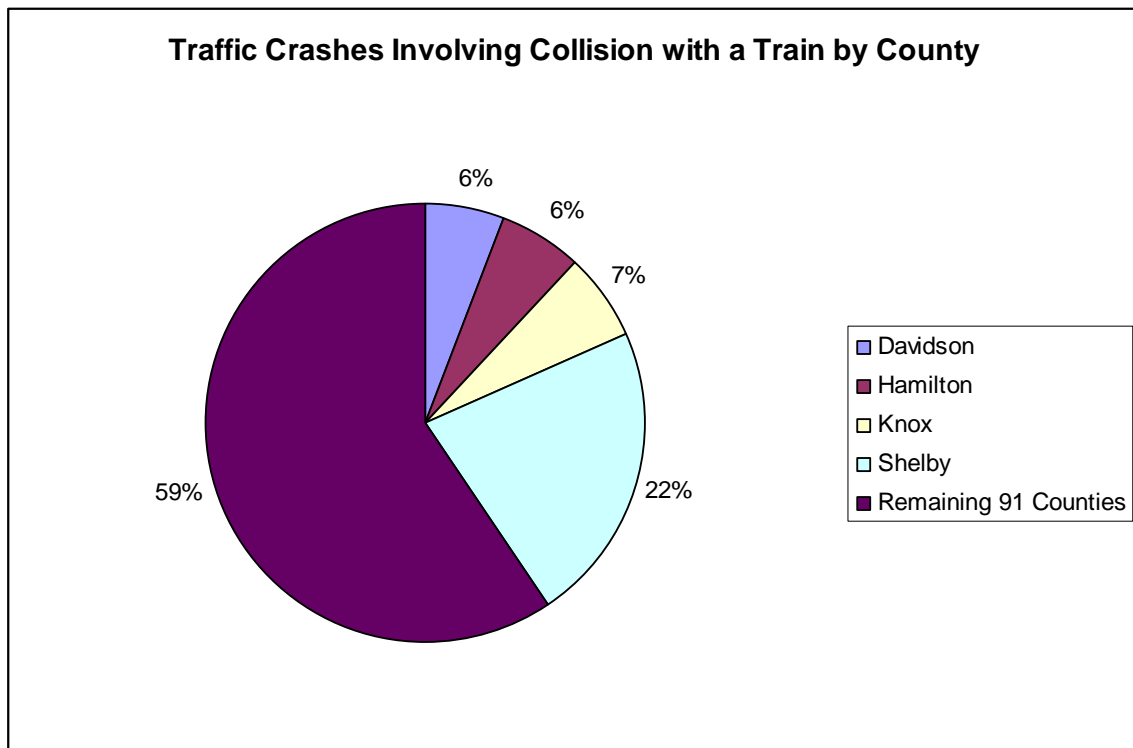




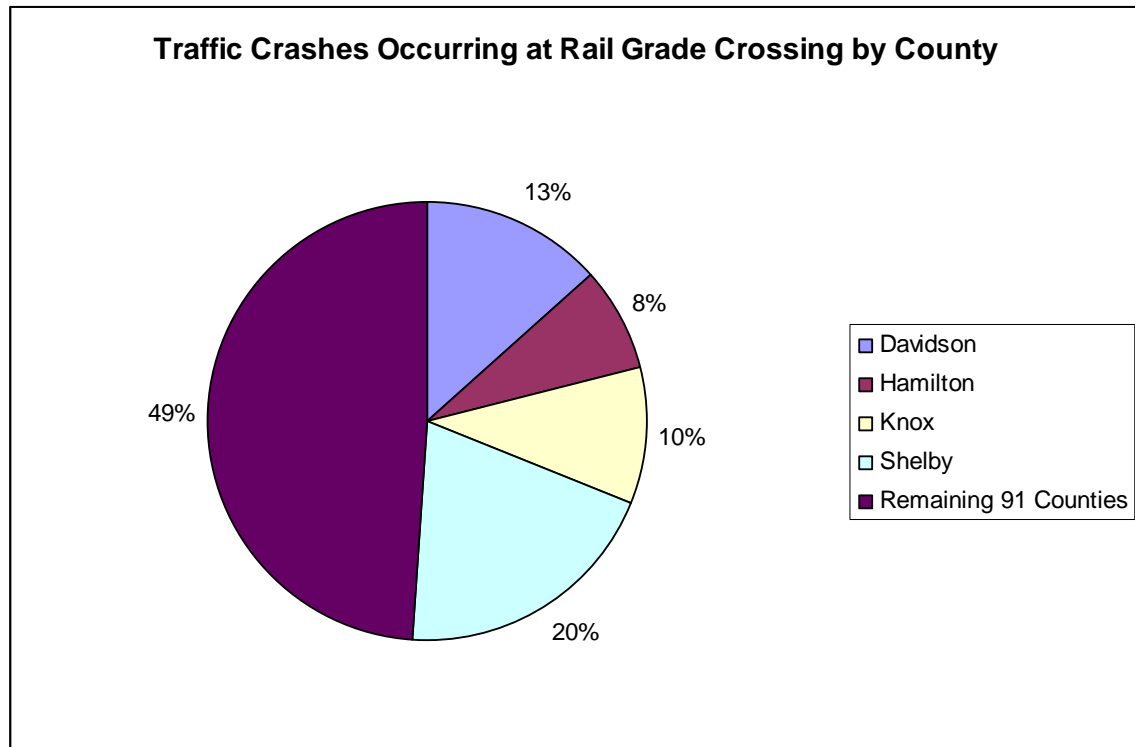
## Section 5: Metropolitan Effects on Crash Totals

This section illustrates the effect that Tennessee's four major metropolitan areas have on the number of crashes. Below are tables for train crashes, crashes occurring at rail grade crossings, and the combination of both for the four metropolitan counties.

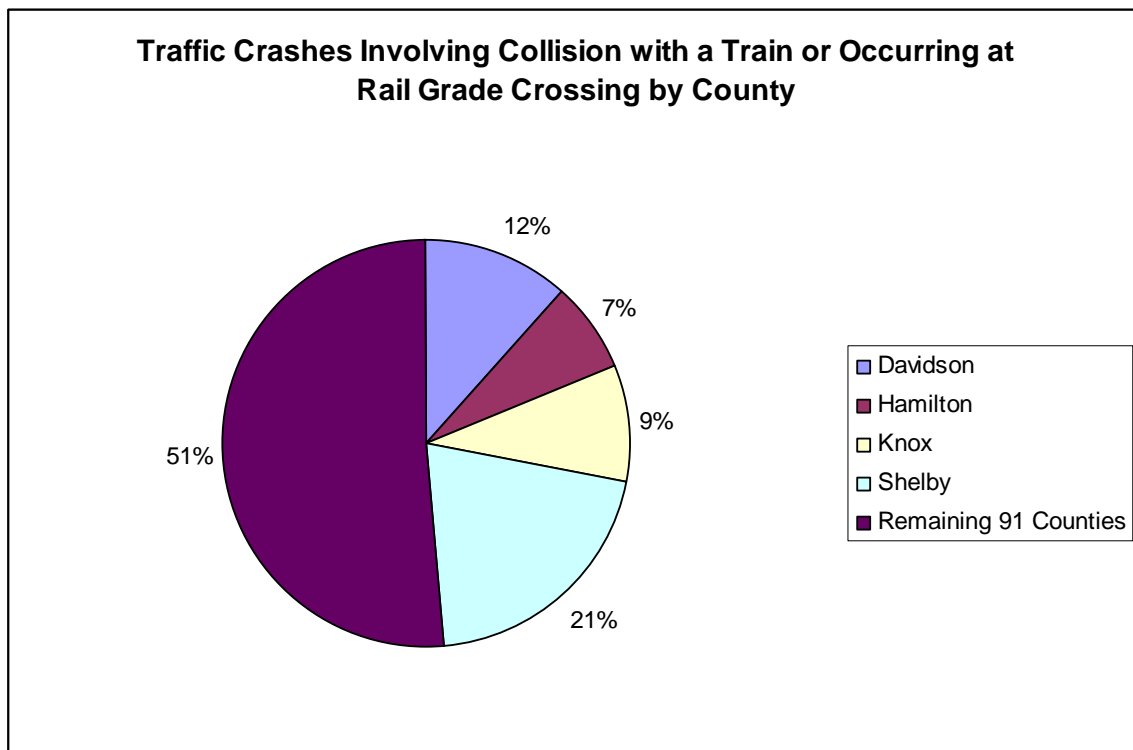
Traffic Crashes Involving Collision with a Train	
Metro Area	% of Total Crashes
Davidson	5.74%
Hamilton	6.15%
Knox	6.56%
Shelby	22.13%
Total	40.57%



Traffic Crashes Occurring at Rail Grade Crossing	
Metro Area	% of Total Crashes
Davidson	13.47%
Hamilton	7.75%
Knox	9.91%
Shelby	20.08%
Total	51.21%



Traffic Crashes Involving Collision with a Train or Occurring at Rail Grade Crossing	
Metro Area	% of Total Crashes
Davidson	11.64%
Hamilton	7.37%
Knox	9.12%
Shelby	20.56%
Total	48.69%



While it is important to show how many of these crashes (nearly half) happen in the four major metropolitan areas of the state, there are some explanations for it. These four counties represent the highest populations among Tennessee's 95 counties. That is, there are more cars on the road to traverse rail grade crossings. Another important aspect is the amount of train traffic these four counties receive. By being major cities of industry, naturally there are more train tracks. With the combination of more train tracks and more people, you will likely see much higher crash rates than in rural areas.



## **Section 6: Considerations for Further Research**

There are a few areas that could improve the research described in this report. One would be to obtain figures that describe train traffic by time of day. By doing this, you could more easily decipher if visibility or volume are bigger factors in train collisions. Another would be train traffic by month. This may help explain why April appears to be more dangerous than other months, while May is less dangerous. By obtaining county populations and number of trains passing through daily, more conclusions could be drawn about the metropolitan areas.

### **Links to Related Sources:**

Federal Transit Administration: [fta.dot.gov](http://fta.dot.gov)

Federal Highway Administration: [fhwa.dot.gov](http://fhwa.dot.gov)

National Highway Traffic Safety Administration: [nhtsa.dot.gov](http://nhtsa.dot.gov)

Federal Motor Carrier Safety Administration: [fmcsa.dot.gov](http://fmcsa.dot.gov)

Tennessee Department of Transportation: [tdot.state.tn.us](http://tdot.state.tn.us)

Federal Railroad Administration: [fra.dot.gov](http://fra.dot.gov)

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